Assignment -1

Internet of Things

Assignment Date	19September 2022
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Maximum Marks	2 Marks

Question-1:

Smart Home

Solution:

```
#include<Servo.h>

Servo s;

Int t=2;

Int e=3;

Int l=11;

Void setup()

{

pinMode(t,OUTPUT);

pinMode(e,INPUT);

pinMode(l,OUTPUT);

pinMode(13,OUTPUT);

pinMode(4,INPUT);

s.attach(5);

Serial.begin(9600);

}

Void loop()

{

//ultrasonic sensor used to indicatate BULB glowing and Door open(servo motor)

digitalWrite(t,1);

digitalWrite(t,0);

delayMicroseconds(10);

digitalWrite(t,0);

float dur=pulseIn(e,1);
```

```
float dis=(dur*0.0343)/2;
 Serial.print("distance:");
Serial.println(dis);
If(dis>150){
 digitalWrite(l,0);
 s.write(180);
 }
 Else{
 digitalWrite(l,1);
 s.write(0);
 }

//Temprature sensor
Double a= analogRead(A0);
Double t= (((a/1024)*5)-0.5)*100;
Serial.print("temprature value:");
Serial.println(t);
Delay(1000);
If(t>100)
 digitalWrite(13,1);
else
 digitalWrite(13,0);
 delay(1000);
 //PIR sensor
 digitalWrite(13,0);
 int a1=digitalRead(4);
 Serial.println(a);
If(a1==1){
 Serial.println("motion detected:");
 digitalWrite(13,1);
 }
```

Delay(1000);

}

CIRCUIT DIAGRAM: